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PREMIUMS
OFFERED IN THE YEAR 1813.
BY THE SOCIETY
INSTITUTED FOR THE ENCOURAGEMENT
OF
ARTS, MANUFACTURES, AND COMMERCE,
IN THE ADELPHI, LONDON.

*THE Meetings of the Society are held at their House
in the Adelphi, London; and the consideration of the Claims, offered
in the present List, will take place, during the Session of the Society,
commencing on the 27th of October, 1813.*

ADVERTISEMENT TO THE PUBLIC.

THE Chief objects of the SOCIETY are to promote the Arts, Manufactures, and Commerce of this Kingdom, by giving honorary or pecuniary Rewards, as seems to them best adapted to the case, for all such useful Inventions, Discoveries, and Improvements, (though not mentioned in this book) as tend to that purpose; and, in pursuance of this plan, the Society have already expended above FIFTY THOUSAND POUNDS, advanced by voluntary subscriptions of their members, and legacies bequeathed.

The Register of the Premiums and Bounties they have given, which may be seen at the SOCIETY'S house in the *Adelphi*, will show the very great advantages which the Public have derived from this Institution.

The meetings of the SOCIETY are held every *Wednesday*, at seven o'clock in the evening, from the fourth *Wednesday* in *October* to the first *Wednesday* in *June*. The several Committees meet on other evenings in the week during the session, as particularly mentioned in their printed book of Rules and Orders.

In order still farther to promote the laudable Views of the SOCIETY, it may be necessary to explain the mode by which members are elected.

Each member has the privilege, at the meetings of the SOCIETY, or by letter to the Secretary, to propose any person who is desirous to become a member, provided the proposal contains the name, with the full addition, and place of abode, of the proposed member, and is signed by three members of the SOCIETY.

Peers of the Realm or Lords of Parliament are, on their being proposed, immediately balloted for; the names of other persons proposed to become Members are to be delivered to the Secretary, read at the next meeting of the SOCIETY, and then inserted in lists which are hung up in the Society's room: they are balloted for at the second following ordinary meeting. In both cases, if two-thirds of the members then voting ballot in their favour, they are deemed perpetual members upon payment of not less than Twenty Guineas in one sum, or subscribing members upon payment of any sum not less than Two Guineas annually.

All members are entitled to vote and assist in all the business of the SOCIETY and the several Committees. The members have also the privilege of recommending two persons as auditors at the meetings of the SOCIETY, and, by addressing a note to the housekeeper, of introducing their friends to examine the various Models, Machines, and Productions, in different branches of Arts, Manufactures, and Commerce, for which rewards have been bestowed; also to inspect the magnificent series of moral and historical Paintings, executed by the late J. BARRY, Esq. which, with some valuable Busts, Statues, &c. decorate the Great Room.

Members have the use of the Society's Library, which is valuable and annually increasing, from donations of scientific and useful books and engravings. The SOCIETY are highly sensible of the great importance of such acquisitions, and are happy to record them, with the names of the donors, in the Volume annually published of the SOCIETY'S Transactions, to which the members are entitled.

Ladies are eligible, as members of the SOCIETY, to all the Privileges thereof, and are alone entitled to vote by proxy at elections, through the medium of any gentleman who is a member, on his producing a written authority for the same.

The time appointed for admission to the Paintings or Models, is from ten to two o'clock, Sundays and Wednesdays excepted.

ORDERED,

SOCIETY'S HOUSE, ADELPHI, JUNE 1st, 1813.

That the several Candidates and Claimants, to whom the Society shall adjudge Premiums or Bounties, do attend at the Society's House in the Adelphi, on the last Tuesday in May, 1814, at eleven o'clock in the Morning precisely, to receive the same; that Day being appointed by the Society for the Distribution of their Rewards: And before that time no Premium or Bounty will be delivered, except to those who are about to leave the Kingdom.

In cases where the Society may think fit to admit excuses for not attending in person, deputies may be substituted to receive the Rewards, provided such Deputies are either Members of the Society, or superior Officers thereof.

*A LIST of the Officers of the SOCIETY, and Chairmen of
the several Committees.*

P R E S I D E N T.

Charles, Duke of Norfolk, F. R. and A. S.

V I C E - P R E S I D E N T S.

John Duke of Bedford, F. A. S.
 Hugh, Duke of Northumberland, F. R. and A. S.
 G. G. L. Marquis of Stafford, K. G.
 Jacob, Earl of Radnor, F. R. and A. S.
 Robert, Earl of Liverpool, F. R. S.
 Charles, Earl of Romney, F. R. S.
 Hon. Robert Clifford, F. R. and A. S.
 Sir William Dolben, Bart. L. L. D.
 Sir Robert Peel, Bart. M. P.
 Sir Watkin Lewes, Knt.
 Thomas Pitt, Esq. F. A. S.
 Richard Clark, Esq. Chamberlain, F. A. S.
 Nathaniel Conant, Esq.
 Richard Powell, M. D.
 John Christian Curwen, Esq.
 Richard Wilson, Esq. F. A. S.

C H A I R M E N O F C O M M I T T E E S.

Accounts.

William Lumley, Esq.
 Abraham Osorio, Esq.

Correspondence and Papers.

William Tooke, Esq.
 Edward Bancroft, M. D. F. R. S.

Polite Arts.

J. Barber Beaumont, Esq. F. A. S.
 R. H. Solly, Esq. F. R. and A. S.

Agriculture.

Matthias Deane, Esq.
 T. H. Andrew, Esq.

Manufactures.

J. Pearsall, Esq.
 J. Trelawney, Esq.

Mechanics.

J. Kenworthy Cooke, Esq.
 Thomas Gill, Esq.

Chemistry.

Henry Coxwell, Esq.
 G. D. Midgley, Esq.

Colonies and Trade.

William Lewis, Esq. F. L. S.
 William Vaughan, Esq.

Miscellaneous Matters.

William Kirkby, Esq.
 Daniel Beaumont, Esq.

SECRETARY, Charles Taylor, M. D.
 ASSISTANT SECRETARY, Mr. Thomas Woodfall.
 HOUSEKEEPER, Miss A. B. Cockings.
 COLLECTOR, Mr. Robert Elwin.

**PREMIUMS offered in 1813, by the SOCIETY instituted at
London, A. D. 1754, for the Encouragement of Arts,
Manufactures, and Commerce.**

PREMIUMS IN AGRICULTURE.

THE candidates for planting all kinds of trees are to mention the nature of the soil, to produce certificates that the respective plantations are properly fenced and secured, and particularly to state the condition of the plants at the time of signing such certificates. Any information which the candidates for the following premiums may choose to communicate, relative to the methods made use of in forming the plantations, or promoting the growth of the several trees, or any other observations that may have occurred on the subject, will be thankfully received.

It is the intention of the Society, that such lands only as are not calculated for the purposes of Husbandry, should be employed for the purposes specified in these advertisements relative to plantations.

Article 1. ACORNS.

FOR having set between the first of October, 1811, and the first of April, 1812, the greatest quantity of land, not less than ten acres, with acorns, with or without seeds, cuttings, or plants of other trees, at the option of the candidate; and for effectually fencing and preserving the same, in order to raise timber; the gold medal.

2. For the second greatest quantity of land, not less than five acres, set agreeably to the above conditions; the silver medal.

Certificates of setting agreeably to the above conditions, and that there are not fewer than three hundred young oaks on each acre, to be delivered to the Society on or before the last Tuesday in December, 1813.

3. **RAISING OAKS.** To the person who shall have raised, since the year 1809, the greatest number of oaks, not fewer than five thousand, either from young plants or acorns, in order to secure a succession of oak timber in this kingdom; the gold medal.

4. For the next greatest number, not fewer than three thousand; the silver medal.

Certificates that there were on the land, at least the number of young oak trees required, in a thriving condition, two years after the planting, with an account of the methods pursued in making and managing the plantation, to be produced to the Society on or before the first Tuesday in January, 1814.

5. **ASCERTAINING THE BEST METHOD OF RAISING OAKS.** To the person who shall ascertain in the best manner, by actual experiments, the comparative merits of the different modes of raising oaks for timber, either from acorns set on land properly dug or tilled, from acorns set by the spade or dibble, without digging or tillage, either on a smooth surface, or among bushes, fern, or other cover: or from young plants previously raised in nurseries, and transplanted; regard being had to the expense, growth, and

other respective advantages of the several methods; the gold medal.

The accounts and proper certificates, that not less than one acre has been cultivated in each mode, to be produced to the Society on or before the last Tuesday in Nov. 1813.

6. **CHESNUTS.** For having sown or set, between the first of October 1811, and the first of April, 1812, the greatest quantity of land, not less than six acres, with Spanish chesnuts, with or without seeds, cuttings, or plants of other trees, adapted to such soil, at the option of the candidate; and for effectually fencing and preserving the same, in order to raise timber; the gold medal.

7. For the second greatest quantity, not less than four acres; the silver medal.

Certificates of sowing or setting, agreeably to the above conditions, and that there are not fewer than three hundred chesnut plants in a thriving state, on each acre, to be delivered to the Society on or before the first Tuesday in January, 1814.

8. **ELM.** For having planted the greatest number of the English elm, not less than eight thousand, between the twenty-fourth of June, 1811, and the twenty-fourth of June, 1812; and for having effectually fenced and preserved the same in order to raise timber: the gold medal.

9. For the second greatest number, not less than five thousand; the silver medal.

Certificates of having planted agreeably to the above conditions, that the plants were in a healthy and thriving state two years at least after making the plantation, and specifying the distance of the plants, to be delivered to the Society on or before the first Tuesday in April, 1814.

10. **LARCH.** For having planted out, between the twenty-fourth of June, 1810, and the twenty-fourth of June, 1811, the greatest number of larch trees, not fewer than five thousand, and for having effectually fenced and preserved the same in order to raise timber; the gold medal.

11. For the next greatest number, not fewer than three thousand; the silver medal.

Certificates of the number of plants, that they were in a healthy and thriving state two years at least after they were planted out, with a general account of the methods used in making the plantation, to be delivered to the Society on or before the last Tuesday in December, 1813.

N. B. The larch trees may be planted either mixed with other trees, or by themselves, as may best suit the convenience of the planter.

12. **ASH.** For having sown or set, in the year 1809, the greatest quantity of land not less than six acres, with ash for timber, with or without seed, cuttings, or plants, of such other trees as are adapted to the soil; the gold medal.

13. For the next greatest quantity, not less than four acres; the silver medal.

Certificates of the sowing or setting, agreeably to the above conditions, that there are not fewer than six hundred ash plants on each acre, in a thriving and healthy condition, two years at least after the sowing or setting, with a general account of the methods used in making the plantation; to be delivered to the Society on or before the last Tuesday in December, 1813.

14. FOREST TREES. To the person who shall have enclosed and planted, or set, the greatest number of acres (not less than ten) of land, that is incapable of being ploughed, such as the borders of rivers, the sides of precipices, and any land that has too many rocks, or that is not calculated to repay the expense of tillage, owing to the surface being too hilly, mountainous, or otherwise unfit for tillage, with the best sorts of forest trees, namely, oak, Spanish-chesnuts, ash, elm, beech, alder, willow, larch, spruce, and silver fir, with or without screens of Scotch fir, adapted to the soil, and intended for timber trees, between the first of October, 1810, and the first of April, 1811; the gold medal.

15. For the second greatest quantity of land, not less than seven acres; the silver medal.

A particular account of the methods used in making and managing the plantations, the nature of the soil, the probable number of each sort of plants, together with proper *certificates* that they were in a healthy and thriving state two years at least after making the plantation, to be delivered to the Society on or before the last Tuesday in December, 1813.

N. B. With the above forest trees, the seeds, cuttings, or plants, of such other trees as are adapted to the soil, and proper for underwood, may or may not be intermixed.

16. NORWAY FIR SEEDLINGS. To the person who shall have planted in the united kingdom, during the year 1813, the greatest number, not less than two thousand, of red wood and white wood, Norway fir seedlings, at sufficient distances from each other to stand for timber trees; the gold medal.

Certificates of the number of plants, that they were in a thriving state two years at least, after they were planted out, with a general account of the method used in making the plantation, to be delivered to the Society on or before the first Tuesday in December, 1815.

N. B. It is recommended to plant the seedlings of about three or four years growth and in a moderately good soil, somewhat sheltered; the wood from the district of Christiana is esteemed the best for carpenters and joiners use; and for spars and upers the trees near to Long Sound, are most valued.

17. WALNUT TREES. For having planted the greatest number of walnut trees, not less than five hundred, between the 24th of June, 1811, and the 24th of June 1812, and for having effectually fenced and preserved the

same, in order to raise timber; the gold medal.

18. For the next greatest number, not fewer than three hundred; the silver medal.

Certificates of having planted agreeably to the above conditions, and that the plants were in a healthy and thriving state, two years at least after making the plantations, and specifying the distance of the plants from each other, to be delivered to the Society, on or before the first Tuesday in April, 1814.

19. SECURING PLANTATIONS OF TIMBER TREES AND HEDGE ROWS. To the person who shall give to the Society the most satisfactory account, founded on experience of the most effectual and least expensive method of securing young plantations of timber trees, and hedge rows, from hares and rabbits, as well as sheep and large cattle, which at the same time shall be least subject to the depredations of wood-stealers; the silver medal.

The accounts and *certificates* of the efficacy of the method, to be produced to the Society on or before the first Tuesday in December, 1813.

20. COMPARATIVE CULTURE OF WHEAT, BROAD-CAST, DRILLED AND DIBBLED. For the best set of experiments, made on not less than twelve acres, four of which to be sown broad-cast, four drilled, and four dibbled, the two latter in equidistant rows, in order fully to ascertain which is the most advantageous mode of cultivating wheat; the gold medal.

It is required that every operation and expense of each mode of culture be fully described: and that proper *certificates* of the nature and condition of the land on which the experiments were made, together with an account of the produce of the corn, the weight per bushel, and also of the straw, be produced to the Society on or before the first Tuesday in February, 1814.

21. BEANS AND WHEAT. To the person who shall have dibbled or drilled between the first of December, 1812, and the first of April, 1813, the greatest quantity of land, not less than ten acres, with beans, in equidistant rows, and hoed the intervals twice or oftener, and shall have sown the same land with wheat in the autumn of the year 1813; the gold medal.

It is required that an account of the sort and quantity of beans, the time of dibbling or drilling, and of reaping or mowing them, the produce per acre thrashed, the expense of dibbling or drilling, hand or horse hoeing, the distance of the rows, and the quality of the soil, together with *certificates* of the number of acres, and that the land was afterwards actually sown with wheat, be produced on or before the second Tuesday in March, 1814.

22. BEANS. To the person who, in the year 1812, shall discover and cultivate, either by the drill or dibbling method, on not less than five acres, a species of horse-beans or tick-beans, that will ripen their seeds before the 21st of August; the silver medal.

It is required that a particular account of the bean, the cultivation, and the expence attending it, with proper *certificates* of the nature and condition of the land on which the experiments were made, together with an *account* of the produce, the weight per Winchester bushel, and a sample of not less than a peck, be produced to the Society on or before the first Tuesday in December, 1813. It is apprehended that if a bean should be brought into cultivation with the habits of the hotspur, or other early peas, that it would in a great measure escape the danger arising from the collier-insect, or other insects, and allow more time for the farmers to till the land for the subsequent crop of wheat. The *accounts* and *certificates* to be delivered on or before the last Tuesday in December, 1813.

23. **PARSNIPS.** To the person who in the year 1812, shall cultivate the greatest quantity of land, not less than five acres, with parsnips, for the particular purpose of feeding cattle or sheep; the gold medal.

Certificates of the quantity of land so cultivated, with a particular *account* of the nature of the soil and weight of the produce on sixteen perches, and also of the condition of the cattle or sheep fed with the parsnips, and the advantages resulting from the practice, to be produced to the Society on or before the second Tuesday in February, 1814.

24. **BUCK WHEAT.** To the person who shall cultivate the greatest quantity of land with buck wheat, not less than thirty acres; the gold medal.

It is required that the time of sowing and reaping be noticed; also a particular *account* of the species, cultivation, and expence attending it, the manner of reaping it, thrashing it, and housing the grain; with proper *certificates* of the nature and condition of the land on which the experiments were made, and the name of the crop, if any, which the same land bore the preceding year, together with an *account* of the produce, and a sample of the seed, not less than a quart, be produced to the Society on or before the second Tuesday in January, 1814.

25. For the next greatest quantity, not less than fifteen acres, on similar conditions; the silver medal.

Information respecting its application to the feeding of cattle, hogs, and poultry, and other of its uses, is also desired. It is known to be particularly serviceable in furnishing honey to bees.

26. **BEES, WAX, AND HONEY.** To the person who shall erect, previous to the first day of September, 1813, an apiary containing the greatest number of hives or boxes stocked with bees, not less than sixty; the silver medal, or twenty guineas.

27. For the next greatest number, not fewer than forty stocks; ten guineas.

Proper *certificates* of the number of stocks, and that they have been in the possession of the claimant during the preceding

summer, to be produced to the Society on or before the first Tuesday in March, 1814.

It is expected that the claimant will give such particular information on the subject, as may tend to benefit the public, and enable other persons to keep bees to advantage.

28. **RAISING GRASS SEEDS.** To the person who shall raise the greatest quantity of each of any of the following named grass seeds, *viz.*—Meadow fox-tail (*alopecurus pratensis*), sweet-scented vernal grass (*anthoxanthum odoratum*), Timothy grass (*phleum pratense*), meadow fescue grass (*festuca pratensis*), smooth-stalked meadow grass (*poa pratensis*), rough-stalked meadow grass (*poa trivialis*); the silver medal.

It is required that *certificates* from persons who have viewed them in a proper state, to identify that they are one or other of the seeds above-mentioned, indicating clearly the particular species, and noticing the quantity produced of such seeds, free from weeds or mixture of other grasses, together with proper samples of the seeds, be produced to the Society on or before the first day of February, 1814.

29. **PRESERVING TURNIPS.** To the person who shall discover to the Society the best and cheapest method of preserving turnips perfectly sound, and in every respect fit for the purpose of supporting and fattening sheep and neat cattle during the months of February, March, and April; the gold medal.

It is required that a full and accurate *account* of the method employed, and the expence attending the process, together with *certificates* that the produce of four acres at the least have been preserved according to the method described, and applied to the feeding of sheep and neat cattle; that the whole were drawn out of the ground before the first day of February, in order to clear the greater part of it previous to its being prepared for corn, and to save the soil from being exhausted by the turnips; and also of the weight of an average sixteen perches of the crop; be produced to the Society on or before the first Tuesday in December, 1813.

30. For the next in quantity and merit, on not less than two acres; the silver medal.

31. **PRESERVING CABBAGES.** To the person who shall discover to the Society the best and cheapest method of preserving drum-headed cabbages perfectly sound, and in every respect fit for the purpose of supporting and fattening sheep and neat cattle during the months of February, March, and April; the gold medal.

32. For the next in quantity and merit, on not less than two acres; the silver medal.

Conditions the same as for preserving turnips, Art. 29.—And the *accounts* to be produced on or before the first Tuesday in December, 1813.

33. **PRESERVING CARROTS, PARSNIPS, OR BEETS.** To the person who shall dis-

cover to the Society the best and cheapest method of preserving carrots, parsnips, or beets, perfectly sound, and in every respect fit for the purpose of supporting horses, and fattening sheep and neat cattle, during the months of February, March, and April; the gold medal.

Conditions the same as for preserving turnips, Art. 29.—And the *accounts* to be delivered in, on or before the first Tuesday in December, 1812.

34. For the next in quantity and merit, on not less than two acres; the silver medal.

35. POTATOES. To the person who shall, in the year 1813, cultivate the greatest quantity of land which has not been used for the cultivation of potatoes for the space of twelve years past, not less than fifty acres, with potatoes of such qualities as to be fit for the use of the table in the months of April, May and June, after their growth the preceding year; the gold medal, or thirty guineas.

36. For the next greatest number, not less than twenty acres; the silver medal, or fifteen guineas.

Proper *Certificates* along with other necessary particulars, to be delivered in to the Society, on or before the last Tuesday in April, 1814.

37. These premiums are extended one year further, on similar conditions.

38. PRESERVING POTATOES. To the person who shall discover to the Society the best and cheapest method of preserving potatoes, two or more years, perfectly sound, without vegetating, and in every other respect fit for the purpose of sets and the use of the table, and consequently of supporting and fattening cattle; the gold medal, or thirty guineas.

It is required that a full and accurate *account* of the method employed, and the expense attending the process, with *certificates* that one hundred bushels at the least have been preserved according to the method described, and that one or more bushels of the same potatoes have been set, and produced a crop without any apparent diminution of their vegetative power, and also that they have been used at table, with entire satisfaction to the person who eat of them, together with a sample of one bushel, be sent to the Society on or before the last Tuesday in December, 1813.

39. For the next greatest quantity, not less than fifty bushels; the silver medal.

40. MAKING MEADOW-HAY IN WET WEATHER. To the person who shall discover to the Society the best and cheapest method, superior to any hitherto practised, of making meadow-hay in wet weather; the gold medal.

A full *account* of the method employed, and of the expense attending the process, with not less than fifty-six pounds of the hay; and *certificates* that at least the produce of six acres of land has been made according

to the method described, and that the whole is of equal quality with the sample; to be produced on or before the first Tuesday in January, 1814.

41. HARVESTING CORN IN WET WEATHER. To the person who shall discover to the Society the best and cheapest method, superior to any hitherto practised, of harvesting corn in wet weather; the gold medal.

A full *account* of the method employed, and of the expense attending the process, with not less than two sheaves of the corn, and *certificates* that at least the produce of ten acres has been harvested according to the method described, and that the whole is of equal quality with the samples, to be produced on or before the first Tuesday in January, 1814.

42. GAINING LAND FROM THE SEA. To the person who shall produce to the Society an account, verified by actual experiment, of his having gained the greatest quantity of land from the sea, not less than fifty acres, on the coast of Great Britain and Ireland; the gold medal.

Certificates of the quantity of land, and that the experiments were begun after the first of January, 1808, to be produced to the Society on or before the last Tuesday in December, 1813.

43. The same premium is extended one year further.

Certificates to be produced on or before the last Tuesday in December, 1814.

44. IMPROVING LAND LYING WASTE. For the most satisfactory *account* of the best method of improving any one of the following soils, being land lying waste or uncultivated, *viz.* clay, gravel, sand, chalk, peat earth, or bog, verified by experiments on not less than fifty acres of land; the gold medal.

45. For the next greatest quantity, not less than thirty acres; the silver medal.

It is required, that the land, before such improvement, be absolutely uncultivated, and in a great measure useless, and that, in its improved state, it be enclosed, cultivated, and divided into closes.

Certificates of the number of acres, of the quality of the land so improved, with a full *account* of every operation and expense attending such improvement, the state it is in as to the proportion of grass to arable, and the average value thereof, to be produced on or before the first Tuesday in February, 1814.

46. MANURES. For the most satisfactory set of experiments, to ascertain the comparative advantages of the following manures, used as top-dressings on grass and corn land, *viz.* soot, coal-ashes, wood-ashes, lime, gypsum, night-soil, or any other fit article; the gold medal.

It is required that the above experiments be made between two or more of the above-mentioned manures, and that not less than two

acres of land be dressed with each manure.

An *account* of the nature of the soil, quantity, and expense of the manure and crops, with *certificates*, to be produced on or before the last Tuesday in February, 1814.

47. RAISING WATER FOR THE IRRIGATION OF LAND. To the person who shall discover to the Society the cheapest and most effectual method of raising water in quantities sufficient to be beneficially employed for the purpose of irrigating land, superior to, and cheaper than any other method now in use; the gold medal, or fifty guineas.

A model, on a scale of one inch to a foot, with *certificates* that a machine at large, on the same construction, has been used, specifying the quantity of water delivered in gallons per hour, and the height to which it was raised, to be produced to the Society on or before the first of March, 1814.

48. PARING PLOUGH. To the person who shall invent and produce to the Society a machine or plough for the purpose of paring land preparatory to burning, superior to any hitherto known, or in use for such purpose, and to be worked by not more than one man and two horses; the silver medal, or twenty guineas.

The machine, and *certificates* that at least three acres have been pared by it in a proper manner, to be produced to the Society on or before the first of January, 1814.

49. MACHINE FOR DIBBLING WHEAT. To the person who shall invent a machine, superior to any hitherto known or in use, to answer the purpose of dibbling wheat, by which the holes for receiving the grain may be made at equal distances and proper depths; the silver medal and ten guineas.

The machine, with *certificates* that at least three acres have been dibbled by it, to be produced to the Society on or before the second Tuesday in January, 1814.

50. MACHINE FOR REAPING OR MOWING CORN. For inventing a machine to answer the purpose of mowing or reaping wheat, rye, barley, oats, or beans, by which it may be done more expeditiously and cheaper than by any method now practised, provided it does not shed the corn or pulse more than the methods in common practice, and that it lays the straw in such a manner that it may be easily gathered up for binding; the gold medal.

The machine, with *certificates* that at least three acres have been cut by it, to be produced to the Society on or before the second Tuesday in December, 1813. Simplicity and cheapness in the construction of this and the preceding machine, will be considered as principal parts of their merit.

51. THRASHING MACHINE. To the person who shall invent a machine by which corn of all sorts may be thrashed more expeditiously, effectually, and at a less expense,

than by any method now in use; the gold medal.

The machine, or a model, with proper *certificates* that such a machine has been usefully applied, that at least thirty quarters have been thrashed by it, and of the time employed in the operation, to be produced to the Society on or before the last Tuesday in February, 1814.

52. DESTROYING THE GRUB OF THE COCKCHAFER. To the person who shall discover to the Society an effectual method, verified by repeated and satisfactory trials, of destroying the grub of the cockchafer, or of preventing or checking the destructive effects which always attend corn, peas, beans, and turnips, when attacked by those insects; the gold medal.

The accounts, with proper *certificates*, to be produced on or before the first Tuesday in January, 1814.

53. DESTROYING WORMS. To the person who shall discover to the Society an effectual method, verified by repeated and satisfactory trials, of destroying worms, or of preventing the destructive effects they occasion on corn, beans, peas, or other pulse; the silver medal.

The accounts, with proper *certificates*, to be produced to the Society on or before the first Tuesday in January, 1814.

54. DESTROYING THE FLY ON HOPS. To the person who shall discover to the Society an easy and efficacious method of destroying the fly on hops, superior to any hitherto known or practised, on not less than four acres of hop ground; the gold medal.

Accounts and *certificates* to be delivered to the Society on or before the first Tuesday in February, 1814.

55. PREVENTING THE BLIGHT, OR RAVAGES OF INSECTS, ON FRUIT TREES AND CULINARY PLANTS. To the person who shall discover to the Society the most effectual method of preventing the blight or ravages of insects on fruit-trees and culinary plants, superior to any hitherto known or practised, and verified by actual and comparative experiments; the silver medal.

The accounts, with proper *certificates*, to be delivered to the Society on or before the second Tuesday in December, 1813.

56. CURE OF THE ROT IN SHEEP. To the person who shall discover to the Society the best and most effectual method of curing the rot in sheep, verified by repeated and satisfactory experiments; the gold medal.

It is expected that the candidates furnish accurate accounts of the symptoms and cure of the disease, together with the imputed cause thereof, and the actual or probable means of prevention, which, with proper *certificates*, must be delivered to the Society on or before the first Tuesday in February, 1814.

57. CURE OF THE FOOT-ROT IN SHEEP. To the person who shall discover to the Society the best and most effectual method of

curing the foot-rot in sheep; the silver medal.

It is required that the cure be ascertained by repeated and satisfactory experiments, and the method of performing it be verified by proper *certificates* delivered to the Society on or before the first Tuesday in February, 1814.

58. PREVENTING THE ILL EFFECTS OF FLIES ON SHEEP. To the person who shall discover to the Society the most effectual method of protecting sheep from being disturbed and injured by flies; the silver medal.

It is required that the method be ascertained by repeated experiments, and that a *certificate* of its efficacy be delivered to the Society on or before the first Tuesday in December, 1813.

59. PROTECTING SHEEP. To the person who, in the year 1812, shall protect the greatest number of sheep, not fewer than one hundred, by hovels, sheds, or any other means, and give the most satisfactory account, verified by experiment, of the advantages arising from the practice of protecting sheep from the inclemency of the weather, by hovels, sheds, or any other means; the gold medal.

A particular *account* of the experiments made, with the advantages arising therefrom, together with the expense, and *certificates* of its utility, to be produced to the Society on or before the first Tuesday in March, 1814.

N. B. It is required that the *certificates* shall specify the length of time the sheep were so protected, and the manner in which they were maintained during that time; together with the general method of managing them.

60. CULTURE OF HEMP. The Society wishing to encourage the growth of hemp for the use of the navy in every part of the united Empire, offer to the person who shall sow with hemp, in drills at least eighteen inches asunder, the greatest quantity of land in any part of the united Empire, not less than fifty acres statute measure, in the year 1813, and shall at the proper season cause to be plucked the summer hemp, (or male hemp bearing no seed) and continue the winter hemp (or female hemp bearing seed) on the ground until the seed is ripe; the gold medal.

61. To the person who shall sow with hemp, in drills at least eighteen inches asunder, the next greatest quantity of land in any part of the united Empire, not less than twenty-five acres, statute measure, in the year 1813, and shall at the proper season cause the same to be plucked as above-mentioned; the silver medal.

Certificates of the number of acres, of the distance of the drills, of the plucking of the hemp, with a general *account* of the soil, cultivation, and produce, to be delivered to the Society, along with fourteen pounds of the hemp and two quarts of the seed, on

or before the second Tuesday in January, 1814.

62. FEEDING OF CATTLE. For the best experiments on stall feeding of cattle (not less than five head) to be continued for the space of twelve months, in order to prove the earliest maturity and greatest propensity to fatten, of the most approved breeds of cattle in Great Britain, specifying the nature of the food given, together with the daily consumption of each beast, with its weekly increase in weight, and such other observations as may be deemed of consequence; the gold medal.

A full *account* of the methods employed, and of the expenses attending the same, and *certificates* of the sundry matters stated, to be produced on or before the second Tuesday in January, 1814.

PREMIUMS FOR DISCOVERIES AND IMPROVEMENTS IN CHEMISTRY, DYEING, AND MINERALOGY.

63. PRESERVING SEEDS OF VEGETABLES. For the best method of preserving the Seeds of plants in a state fit for vegetation a longer time than has hitherto been practised, such method being superior to any known to the public, and verified by sufficient trial, to be communicated to the Society on or before the last Tuesday in December, 1813; the gold medal, or thirty guineas.

64. PREVENTING THE DRY-ROT IN TIMBER. To the person who shall discover to the Society the cause of the dry-rot in timber, and disclose a certain method of prevention superior to any hitherto known; the gold medal, or thirty guineas.

The *accounts* of the cause, and method of prevention, confirmed by repeated experiments, to be produced to the Society on or before the last Tuesday in Dec. 1813.

65. PRESERVING SALTED PROVISIONS FROM BECOMING RANCID OR RUSTY. To the person who shall discover to the Society the best, cheapest, and most efficacious method of preserving salted provisions from becoming rancid or rusty; the gold medal, or thirty guineas.

A full *description* of the method, with proper *certificates* that it has been found on repeated trials to answer the purpose intended, to be produced to the Society on or before the first Tuesday in February, 1814.

66. REFINING WHALE OR SEAL OIL. For disclosing to the Society an effectual method of purifying whale or seal oil from the glutinous matter that incrusts the wicks of lamps, and extinguishes the light though fully supplied with oil; the gold medal, or fifty guineas.

It is required that the whole of the process be fully and fairly disclosed, in order that satisfactory experiments may be made by the Society to determine the validity of

the claim; and *certificates* that not less than twenty gallons have been purified according to the process delivered in, together with two gallons of the oil, in its unpurified state, and two gallons so refined, to be produced to the Society on or before the second Tuesday in February, 1814.

67. MANUFACTURING TALLOW CANDLES. To the person who shall discover to the Society a method of hardening or otherwise preparing tallow, so that candles may be made of it which will burn as clear and with as small a wick as wax candles, without running, and may be afforded at a less expense than any at present made with spermaceti; the gold medal, or fifty guineas.

Certificates that 112lb. of such tallow have been made into candles, and 12lb. of the candles made thereof, to be produced to the Society on or before the Second Tuesday in January, 1814.

68. CANDLES FROM RESIN OR OTHER SUBSTANCES. To the person who shall discover to the Society the best method of making candles of resin, or any other substance, fit for common use, at a price much inferior to those made of tallow only; the gold medal, or thirty guineas.

Six pounds at least of the candles so prepared, with an *account* of the process, to be delivered to the Society on or before the last Tuesday in December, 1813.

69. METHOD OF SEPARATING SUGAR IN A SOLID FORM FROM TREACLE. To the person who shall discover to the Society the best method of separating sugar from treacle, in a solid form, at such an expense as will render it advantageous to the public; the gold medal, or fifty guineas.

A quantity of the sugar so prepared in a solid form, not less than thirty pounds weight, with an *account* of the process, and *certificates* that not less than one hundred weight has been so prepared, to be produced to the Society on or before the first Tuesday in February, 1814.

70. INCREASING STEAM. To the person who shall invent and discover to the Society a method, verified by actual experiments, of increasing the quantity or force of steam, in steam-engines with less fuel than has hitherto been employed, provided that in general the whole amount of the expenses in using steam-engines may be considerably lessened; the gold medal, or thirty guineas.

To be communicated to the Society on or before the first Tuesday in January, 1814.

71. SUBSTITUTE FOR TAR. To the person who shall invent and discover to the Society the best substitute for Stockholm tar, equal in all its properties to the best of that kind; and prepared from materials the produce of the united Kingdom and its Colonies; the gold medal, or one hundred guineas. A quantity of the substitute, not less than one hundred weight, with *certificates* that at least one ton has been manufactured, and that it can be afforded at a price not

exceeding that of the best foreign tar, together with an *account* of the process, to be delivered to the Society on or before the first Tuesday in March, 1814.

72. TURPENTINE FROM THE SCOTCH FIR OR PINUS SYLVESTRIS. For the greatest quantity of turpentine, not less than two hundred weight prepared in Great Britain from that species of fir called the Scotch fir, or *Pinus sylvestris*, Linn.; the gold medal.

Certificates of the turpentine being prepared from such trees of British growth, together with fifty-six pounds of the turpentine, to be delivered to the Society on or before the second Tuesday in January, 1814.

73. For the next greatest quantity prepared, not less than one hundred weight, on similar conditions; the silver medal.

N. B. The Society being in possession of the method practiced for extracting turpentine from the trees whilst growing, and of samples so procured, information will be given upon the subject, on application for that purpose, at the Society's house.

74. PREPARATION OF TAN. To the person who shall prepare, in the most concentrated form, so as to be easily portable, and at a price applicable to the purposes of manufacturers, the largest quantity, not less than one hundred weight of the principle called by the French *tannin*, which abounds in oak-bark and many other vegetable substances; the gold medal, or thirty guineas.

Certificates of the superior quality of the quantity so prepared, and a sample of not less than 28lb. to be produced to the Society on or before the last Tuesday in January, 1814.

75. INDELIBLE INK. To the person who shall discover to the Society a method of making a black ink proper for writing, superior to any at present known, indestructible by chemical applications, and not dearer than that which is now in common use; the silver medal, or fifteen guineas.

Certificates that not less than two gallons of such ink have been actually prepared, and found to possess the qualities above-mentioned, with a full detail of the process of making it, and two quarts of the ink to be delivered to the Society on or before the second Tuesday in January, 1814.

76. PREPARATION OF A RED STAIN FOR COTTON CLOTH. To the person who shall communicate to the Society the cheapest and most effectual method of printing or staining cotton cloths with a red colour, by an immediate application of the colouring matter to the cloth, equally beautiful and durable with the red colours now generally procured from decoctions of madder; the gold medal, or fifty guineas.

Certificates that the above process has been advantageously used on ten pieces of calico, each twenty-one yards or upwards in length; one piece of the calico so printed,

a quart of the colour in a liquid state, and a full account of the preparation and application to be produced to the Society on or before the second Tuesday in January, 1814.

77. PREPARATION OF A GREEN COLOUR FOR PRINTING COTTON CLOTH. To the person who shall communicate to the Society the best and cheapest method of printing with a full green colour on cotton cloth, by an immediate application of the colouring matter from a wooden block to the cloth, equally beautiful and durable as the colours now formed from the complicated process of the decoction of weld on alumine, and the solutions of indigo by earths or alkaline salts; the gold medal, or fifty guineas.

Certificates and conditions as for Premium 76.

78. RENDERING MUSLIN LESS COMBUSTIBLE. To the person who shall discover to the Society a method of rendering muslin less combustible, to be effected by a cheaper and more effectual mode than any hitherto known; the silver medal.

Specimens of the muslin so prepared, with a full account of the process employed for the purpose, to be produced to the Society on or before the first Tuesday in February, 1814.

N. B. It is expected that the means employed shall neither injure the quality of the muslin, stain it, nor damage any print or dye with which it may be coloured.

79. WHITE SUBSTANCE FOR THE BASIS OF PAINT. To the person who shall produce to the Society the best white substitute, superior to any hitherto known, for the basis of paint, equally proper for the purpose as the white-lead now employed; such substitute not to be of a noxious quality, and to be afforded at a price not materially higher than that of white-lead, the gold medal, or one hundred guineas.

A quantity of the substitute, not less than 50lb. weight, with an account of the process used in preparing it, and *certificates* that at least one hundred weight has been manufactured, to be produced to the Society on or before the first Tuesday in January, 1814.

80. RED PIGMENT. To the person who shall discover to the Society a full and satisfactory process for preparing a red pigment, fit for use in oil or water, equal in tone and brilliancy to the best carmines and lakes now known or in use, and perfectly durable; the gold medal, or fifty guineas.

One pound weight of such colour, and a full disclosure of its preparation, to be produced to the Society on or before the first Tuesday in February, 1814.

N. B. It is not required that the colour should resist the action of fire, or chemical applications, but remain unaltered by the common exposure to strong light, damps, and noxious vapours.

81. ULTRAMARINE. To the person who shall prepare an artificial ultramarine, equal in colour, brilliancy, and durability, to the

best prepared from lapis lazuli, and which may be afforded at a cheap rate; the gold medal, or thirty guineas.

The conditions are the same as in the preceding Premium for the red pigment.

82. BLUE PIGMENT FROM IRON. To the person who shall invent, and discover to the Society, the best blue pigment from iron, superior to Antwerp or Prussian blue in colour and durability, fit for use in oil or water, which may be afforded at a cheap rate; the gold medal, or thirty guineas.

One pound weight of the colour, and a full disclosure of its preparation, to be produced to the Society on or before the first Tuesday in February, 1814.

N. B. It appears from the analysis of lapis lazuli by Klaproth, and the experiments of Guyton, (related in the *Annales de Chimie*) that ultramarine is a blue sulphurat of iron, and that a blue substance much resembling it is constantly found amongst the scoræ of blast furnaces where iron is reduced. The Society by offering the above premium wish to call the attention of persons to these facts, and encourage them to make experiments, in the hope of producing a blue pigment which may be substituted for ultramarine.

83. DESTRUCTIVE EFFECTS FROM MOTHS. To the person who shall discover to the Society a cheap, easy, and effectual method, verified by repeated and satisfactory trials, of preventing the destructive effects occasioned by moths and other insects, in furs, woollens, and other articles, superior to any hitherto known or practised; the silver medal, or fifteen guineas.

The accounts, with proper *certificates*, to be produced to the Society on or before the first Tuesday in January, 1814.

84. STATUARY MARBLE. To the person who shall discover, within Great Britain or Ireland, a quarry, of white marble fit for the purposes of statuary, and equal in all respects to those kinds now imported from Italy; the gold medal, or one hundred guineas.

A block of at least three feet in length, two in height, and two in width, with an account of the situation of the quarry, and *certificates* of its possessing considerable extent, to be produced to the Society on or before the first Tuesday in February, 1814.

N. B. In order to prevent useless expense or trouble to the claimant in forwarding so large a block, the Society will be ready to examine any smaller specimen of the marble, and express their opinion of its value to the candidate before the block required by the above premium is produced.

85. PREPARATION OF SULPHURIC ACID, FROM SULPHUR, WITHOUT THE USE OF ANY NITRIC SALT. To the person who shall prepare the largest quantity, (not less than one ton) of sulphuric acid from sulphur without any nitric salt, of a specific gravity not in-

ferior to the best sulphuric acid of commerce; the gold medal, or fifty guineas.

Certificates that not less than the above quantity of such an acid has been prepared, together with a sample, to be produced to the Society on or before the first Tuesday in January, 1814.

86. PREPARATION OF ANY ALKALINE OR EARTHEN NITRATE. To the person who shall prepare, in Great Britain, the largest quantity, not less than one hundred weight, of any salt of nitric acid, with either earths or alkalis, by a method superior to, and as cheap as those hitherto practised; the gold medal, or one hundred guineas.

Certificates of the above quantity having been prepared, and a sample of not less than 28lb. to be produced to the Society on or before the last Tuesday in January, 1814.

87. FINE BAR IRON. To the person, in Great Britain, who shall make the greatest quantity of bar-iron, not less than ten tons, with coak, from coak pigs, equal in quality to the best iron imported from Sweden or Russia, and as fit for being converted into steel; the gold medal, or fifty guineas.

Samples, not less than one hundred weight, with *certificates* that the whole quantity is of equal quality, to be produced to the Society on or before the first Tuesday in January, 1814.

88. PRESERVING IRON FROM RUST. To the person who shall invent and discover to the Society a cheap composition, superior to any now in use, which shall effectually preserve wrought iron from rust; the gold medal, or fifty guineas.

A full description of the method of preparing the composition, with *certificates* that it has stood at least two years unimpaired, being exposed to the atmosphere during the whole time, to be produced to the Society, with ten pounds weight of the composition, on or before the first Tuesday in January, 1814.

89. REFINING BLOCK TIN. To the person who shall discover to the Society the best method of purifying or refining block-tin, so as to render it fit for the finest purposes to which grain-tin is now applied, and not higher in price; the gold medal, or fifty guineas.

Certificates that not less than three tons have been so refined or purified, with a full detail of the process, and a quantity, not less than one hundred weight, of the tin so refined, to be produced to the Society on or before the first Tuesday in January, 1814.

90. GLAZING EARTHEN-WARE WITHOUT LEAD. To the person who shall discover to the Society, the cheapest, safest, most durable, and most easily fusible composition, fit for the purpose of glazing the ordinary kinds of earthen-ware, without any preparation of lead, and superior to any hitherto in use; the gold medal, or thirty guineas.

Specimens of the ware so glazed, with proper *certificates* of its having succeeded, and a sample of the materials made use of,

to be produced to the Society on or before the first Tuesday in February, 1814.

91. COBALT, ZAFFRE, AND SMALT. For the discovery of a mine of cobalt in Great Britain or Ireland, that will produce a sufficient quantity of the mineral, of good quality, to supply a manufacture of Zaffre or Smalt; the gold medal, or thirty guineas.

Certificates that at least one ton of the ore has been raised; and five pounds of Zaffre, and ten pounds of Smalt made therefrom, to be produced to the Society on or before the last Tuesday in March, 1814.

N. B. It appears from the minutes of the Society, in 1755, that a discovery of cobalt was made at or near Truro in Cornwall, but not a sufficient quantity of ore found to answer the desired purpose.

92. REFINING COPPER FROM THE ORE.

To the person who shall discover to the Society the best method of separating, purifying, and refining copper from the ore, so as to render it fit for the finest purposes to which fine copper is now applied, and by a process superior to any hitherto known or in use, and not higher in price; the gold medal, or fifty guineas.

Certificates that not less than three tons have been so prepared or refined, and a quantity not less than one hundred weight of the copper so refined, to be produced to the Society, on or before the first Tuesday in February, 1814.

93. MINERALOGICAL MAP OF ENGLAND AND WALES. To the person who shall complete and publish an accurate mineralogical map of England and Wales, on a scale of not less than ten miles to an inch, containing an account of the situation of the different mines therein, and describing the kinds of minerals thence produced; the gold medal, or fifty guineas.

Certificates of the accuracy of such map, together with the map, to be produced to the Society on or before the first Tuesday in February, 1814. The map to remain the property of the Society.

94. MINERALOGICAL MAP OF IRELAND. The same premium is offered for a mineralogical map of Ireland, on similar conditions.

95. MINERALOGICAL MAP OF SCOTLAND. The same premium is offered for a mineralogical map of Scotland, on similar conditions.

96. NATURAL HISTORY. To the author who shall publish, in the year 1813, the natural history of any county in the united kingdom; the gold medal, or fifty guineas.

It is required that the several natural productions, animal, vegetable, and mineral, peculiar to the county, or found therein, be carefully and scientifically arranged and described, in order that the public may be enabled to judge what arts or manufactures are most likely to succeed in such county. The work to be delivered to the Society on or before the last Tuesday in January, 1814, and a copy to be the property of the Society.

PREMIUMS IN POLITE ARTS.

97. HONORARY PREMIUMS FOR DRAWINGS BY NOBILITY. For the best original drawing of any kind, by young gentlemen under the age of twenty-one, sons, or grandsons of peers or peeresses in their own right, of Great Britain or Ireland; the honorary medal of the Society in gold.

98. The silver medal for the best copy.

99—100. The same premiums will be given, on the like conditions, to young ladies, daughters or grand-daughters of peers or peeresses in their own right, of Great Britain or Ireland.

101. HONORARY PREMIUMS FOR DRAWINGS BY GENTLEMEN. For the best original drawing of any kind, by young gentlemen under the age of twenty-one; the gold medal.

102. For the best copy the silver medal.

103—104. The same premiums will be given, for drawings by young ladies.

N.B. As the foregoing honorary premiums are intended only for such of the nobility and gentry as may hereafter become patrons or patronesses of the arts; persons professing any branch of the polite arts, or any business dependant on the arts of design, or the sons and daughters of such persons, will not be admitted candidates in the above classes, including 97 to 104.

105. DRAWINGS OF OUTLINES. For the best outline, after the plaster cast of the Gladiator Repellens, by persons of either sex under the age of twenty-one, the figure not less than eighteen inches; the silver medal.

106. DRAWINGS OF LANDSCAPES. For the best drawings, in water colours, of a landscape after nature, not less than eighteen inches by twelve, by persons of either sex, under twenty-one years of age; the silver medal.

107. HISTORICAL DRAWINGS. For the best historical drawing, being an original composition of three or more human figures, the height of the principal figure not less than eight inches, by persons of either sex, under twenty-one years of age; the gold medal.

108. For the next in merit; the silver medal.

109. PREMIUMS FOR DRAWINGS IN GENERAL. For the best original drawing of any kind, by persons of either sex, under the age of twenty-one; the gold medal.

110. For the best copy, the silver medal.

111. PERSPECTIVE DRAWINGS OF MACHINES. For the best perspective drawings of machines, by persons under twenty-one years of age; the silver medal.

112. PAINTINGS IN OIL. For the best painting in oil, of a landscape after nature, the size not less than thirty-six by twenty-eight inches; by persons of either sex, under twenty-five years of age; the gold medal.

113. For the next in merit, the silver medal. Each candidate must mention from whence the view was taken.

114. MARINE PAINTING. For the best

original painting in oil of a marine subject, the size not less than thirty-six by twenty-eight inches, by persons of either sex, under twenty-five years of age, the lesser gold medal.

115. For the next in merit, the lesser silver medal, on similar conditions.

116. ARCHITECTURAL DESIGNS. For the best original design of a church, consisting of plan, elevation, and section, the gold medallion; the drawings to remain the property of the Society.

117. For the next in merit; the silver medallion on similar conditions.

The following inscriptions to be engraved on these medallions; *The Premium given by the Society for the Encouragement of Arts, Manufactures, and Commerce, in conformity to the Will of John Stock, Esq. of Hampstead.*

118. PLASTER CAST. For the best original model of a single figure, or group not exceeding three figures; the lesser gold medal.

119. For the next in merit; the lesser silver medal, on similar conditions.

N.B. Purity and simplicity are required to be attended to in the general form, as well as correctness in the several parts of the figure.

A cast from the model to remain the property of the Society.

120. BRONZES. For the best drapery figure or group cast in bronze; if a single figure, not less than twelve inches high, and if a group, not less than nine inches; and which will require the least additional labour to repair; the gold medal, or the silver medal and twenty guineas.

The Society, sensible of the great importance of correct Drawing and free Etching, as the best and most solid ground work for the rising school of engraving, offer the following premiums for the pupils of engravers, or others who practice that art.

121. DRAWINGS BY ENGRAVERS PUPILS, &c. For the best finished drawing of the statue of the Discobolus, No. 34, in the British Museum; the size of the drawing not less than eighteen inches, by persons under twenty-one years of age; the silver medal.

122. DRAWINGS OF THE HAND AND FOOT. For the best drawing with a reed, or common pen, of the human hand and foot, the size of life, or larger; the several parts marked with anatomical accuracy; the lesser silver medal.

123. PEN DRAWING OF A HEAD. For the best free pen drawing of the head of Homer, marked No. 33, in the British Museum, not less than twelve inches in height; the lesser silver medal.

N.B. Those artists who are inclined to make trial for the premiums in drawing of the Discobolus, or the head of Homer, (with permission of the trustees) at the British Museum, in the room marked X, may be informed by the Secretary, of the proper mode of applying for that permission.

124. **ETCHING OF AN HISTORICAL SUBJECT.** For the best free etching in historical composition from a picture of eminence; the gold medal.

125. For the next in merit; the silver medal.

126. **ETCHING OF A LANDSCAPE.** For the best free etching in landscape composition, from a picture of eminence; the silver medal.

127. **ETCHING OF A PORTRAIT.** For the best free etching of a portrait; the silver medal.

128. **HISTORICAL ENGRAVING.** For the best finished engraving in historical composition, wherein the chiaro scuro is required to be particularly attended to; the gold medal.

129. For the next in merit; the silver medal.

130. **LANDSCAPE ENGRAVING.** For the best finished engraving in landscape composition, wherein the same attention to chiaro scuro will be required; the gold medal.

131.—For the next in merit; the silver medal.

132. **ENGRAVING OF A PORTRAIT.** For the best finished engraving of a portrait, with equal attention to chiaro scuro; the gold medal.

133. For the next in merit; the silver medal.

N. B. In the class of finished engravings the Society require a forward aquafortis impression, and two in progressive states of the plate; and a finished proof to be sent, and to remain with the Society.

134. **ENGRAVING ON WOOD BLOCKS.** For the best engraving on wood blocks of an historical subject; the size of the principal figure not less than six inches in height, and the block to be at least twelve inches by nine; the gold medal.

Two or more impressions, with the block, to be produced to the Society. The impressions, but not the block, to remain the property of the Society.

135. For the next in merit; the silver medal, on similar conditions.

136. **MEDAL DIE ENGRAVING.** For the best die engraving of one or more heads after the engraver's own model; the gold medal.

137. For the next in merit; the silver medal.

138. For the best die engraving of one figure, or a group consisting of not more than three figures, after the engraver's own model; the gold medal.

139. For the next in merit; the silver medal.

The dies, with two impressions or casts, and the model, in each claim for medal die sinking, are to be produced to the Society. The impressions or casts, but not the model or die, to remain the property of the Society.

140. **BLACK LEAD PENCILS.** The silver medal, or twenty guineas, is offered to the person who shall discover an effectual method of freeing black-lead from impurity, and improving its quality, for the purposes of the arts.

N. B. The object of this premium is to obtain hard or soft pencils, uniformly of a good quality.

CONDITIONS.

FOR THE POLITE ARTS.

No articles in the class of polite arts, whether for claims or bounties, are to be admitted into the Society after the first Tuesday in March, 1814.

No person who has gained the first premium in any class shall be admitted a candidate in a class of inferior age; and no candidate shall receive more than one premium in one year.

No person shall be admitted a candidate in any class, who has already obtained the first premium in that class.

No more than one performance in any class shall be received from the same candidate.

All performances (to which premiums or bounties are adjudged) shall remain with the Society until after the first Wednesday in June, 1814, when they will be re-delivered, unless mentioned in the premiums to the contrary.

No performance shall be admitted, that has obtained a reward from any other society, or academy, or been offered for that purpose.

It is required, that the matters for which premiums are offered, be delivered in without the names, or any intimation to whom they belong appearing; that each particular thing be marked in what manner each claimant thinks fit, such claimant sending with it a paper sealed up, having on the outside a corresponding mark, and on the inside the claimant's name, residence, and age; which paper is not to be opened unless the candidate be successful, or by a special vote of the Society.

To encourage real merit; and prevent attempts to impose on the Society, by producing drawings made or retouched by any other person than the candidate, the Society require a specimen of the abilities of each successful candidate, to be made under the inspection of the committee of Polite Arts.

All candidates in the Polite Arts are required to signify, on their drawings, whether the performances are originals or copies; and to mark thereon the class for which each is intended, and if possible to send the originals from which copies are taken.

All copies of drawings, &c. are to be on a different scale from the original.

PREMIUMS FOR ENCOURAGING
AND IMPROVING MANUFACTURES.

141. **EMPLOYMENT OF FEMALES.** To the person who shall instruct and employ the greatest number of females, not fewer than twenty, in the making of mens' cloaths, particularly of woollen cloth, and not being for the use of the army or navy; the gold medal, or fifty guineas.

Certificates that the number of women above-mentioned, have been constantly so employed for at least three months, to be produced to the Society, on or before the last Tuesday in March, 1814.

142. For the next greatest number of women so employed, not fewer than ten; the silver medal, or fifteen guineas, on similar conditions.

143. **CLOTH FROM HOP-STALKS, NETTLES, &c.** To the person who shall produce to the Society, the greatest quantity, not less than thirty yards of cloth, at least 27 inches wide, made in Great Britain or Ireland, of hop-stalks or bines, nettles, or other raw vegetable substances, the produce of Great Britain or Ireland, superior to any hitherto manufactured from such substances, and which can be generally afforded as cheap as cloth of equal quality and appearance now made from hemp, flax, or cotton, and much finer in quality than any hitherto manufactured in England from hop stalks, &c.; the gold medal, or thirty guineas.

One pound of the thread of which the cloth is made, and thirty yards of the cloth, together with proper *certificates* that the whole is manufactured from hop-stalks, or bines, &c. to be produced to the Society on or before the last Tuesday in December, 1813.

N. B. The Society is already in the possession of cloth made in England from hop-stalks or bines, and nettles, which may be inspected by application to the House-keeper.

144. **SHEEP'S WOOL.** To the person who shall prove to the Society that he has sold the largest quantity of Merino wool, or such wool as will answer the same purposes, being the produce of his own flock, in the United Kingdom, for the purpose of being manufactured in superfine cloth, the quantity of wool not less than five hundred weight, in the year 1813; the gold medal.

Certificates, along with samples of the wool, and of cloth manufactured from it, to be produced to the Society on or before the last Tuesday in March, 1814.

145. For the next greatest quantity, not less than two hundred and fifty pounds; the silver medal on similar conditions.

146. **HOGS' BRISTLES.** To the person who shall prepare the greatest quantity of bristles, from swine bred in the united kingdoms, equal in quality to those imported

from Russia or Prussia, and at as cheap a rate; the silver medal or fifteen guineas.

Certificates that not less than one hundred weight have been so prepared, and a sample of not less than fourteen pounds of such bristles, to be produced to the Society on or before the last Tuesday in February, 1814.

147. **WICKS FOR CANDLES OR LAMPS.** To the person who shall discover to the Society a method of manufacturing hop-stalks or bines, nettles, or any other cheap material, the growth of Great Britain, so as to render them equally fit for the purpose of supplying the place of cotton, for wicks of candles or lamps; the silver medal, or twenty guineas.

Samples, not less than five pounds weight, of the wick so prepared, to be produced to the Society on or before the last Tuesday in December, 1813, with *certificates* that the whole quantity is equal in quality to the sample.

148. **EXPERIMENTS TO ASCERTAIN THE PROPER THICKNESS OF WICKS FOR CANDLES.** To the person who shall make known to the Society the most satisfactory result of a series of experiments actually made by him to determine the best thickness of cotton wicks for candles, so as to obviate the defects of those commonly used; the silver medal, or ten guineas.

Certificates that not less than one hundred weight have been so made, and six pounds of the candles, to be produced to the Society on or before the last Tuesday in February, 1814.

N. B. The intention in offering this premium, is to ascertain the proper thickness or bulk of the wick in proportion to that of the tallow, and to remove the unpleasant consequences and waste arising from the sparkling, or guttering, of the candles in common use.

149. **PAPER FROM RAW VEGETABLE SUBSTANCES.** To the person who shall, between the first of January, 1813, and the first of January, 1814, make the greatest quantity, and of the best quality, (not less than ten reams) of good and useful paper, from raw vegetable substances, the produce of Great Britain or Ireland, of which one hundred weight has not been used in manufacturing paper previous to January, 1812, superior to any hitherto manufactured from such substances, and which can be generally afforded as cheap as paper of equal quality and appearance now made from rags; the silver medal or twenty guineas.

N. B. The object of the Society being to add to the number and quantity of raw materials used in this manufacture, it is their wish to include every useful sort of paper, and to introduce such natural products as can be easily and cheaply procured in great quantities. The Society are in possession of two volumes containing a great variety of specimens of paper made from raw vegeta-

ble substances, viz. nettles, potatoe-haulm, poplar, hop-bines, &c. which volumes may be inspected by any person on application to the Housekeeper.

Certificates of the making such paper, and one ream of the paper, to be produced on or before the second Tuesday in January, 1814.

150. **TRANSPARENT PAPER.** To the person who shall discover to the Society a method of making paper from the pulp, that shall be perfectly transparent, and of a substance and body equal to foolscap that shall take and bear common writing-ink, with the same facility and correctness as writing paper generally in use; the silver medal, or twenty guineas.

Certificates of the making such paper, an account of the process, and one ream of the paper, to be produced on or before the second Tuesday in January, 1814.

151. **CHINTZ PATTERNS FOR CALICO-PRINTERS.** For the best original pattern in a new taste, of light and dark-ground chintz for garment-work, or furniture, fit for the purposes of calico-printers, by persons of either sex; the silver medal. The pattern for which the premium is adjudged to remain the property of the Society.

152. **COPPER-PLATE PATTERNS FOR CALICO-PRINTERS.** For the best pattern, in a new style, fit for the purposes of calico-printers for garment-work, or furniture; the silver medal. The pattern for which the premium is adjudged to remain the property of the Society.

N. B. The patterns to be produced on or before the last Tuesday in February, 1814.

153. **GLOVES EQUAL TO FRENCH KID.** To the person who shall make known to the Society, a process equal to that of the French, or a superior one; for preparing, dyeing, and finishing the skins, verified by actual experiments, and the communication accompanied with at least a dozen pair of gloves made from skins so prepared in an equal or superior manner; the gold medal, or forty guineas.

Certificates from competent persons fully approving of the result of such experiments, together with the gloves and communication to be produced to the Society on or before the last Tuesday in March, 1814.

154. **IMPROVED CAT-GUT EQUAL TO ROMAN OR ITALIAN.** To the person who shall discover to the Society the best method of manufacturing, in the United Kingdom of Great Britain and Ireland, the intestines of sheep, lambs, goats, or of any other animals, into the article called cat-gut, equally strong, clear, smooth, even, and free from knots, as the best Roman and Italian strings, and at a price not exceeding what they are usually sold for in England; the gold medal, or thirty guineas.

Certificates that not less than fifty pounds weight have been so prepared by the claimant, with a full detail of the process, and samples of the article of various thicknesses,

to be produced to the Society on or before the first Tuesday in February, 1814.

154 *. For the next greatest quantity, not less than twenty-five pounds; the silver medal, or twenty guineas, on similar conditions.

PREMIUMS IN MECHANICS.

155. **GUNPOWDER MILLS.** To the person who, in the year 1813, shall invent and bring to perfection the most effectual method of so conducting the works of gunpowder-mills, in the business of making gunpowder, as to prevent explosion, the gold medal, or one hundred guineas.

Certificates and accounts of the method having been put in practice in one or more gun-powder mills in this kingdom, and that it promises, in the opinion of the best judges concerned in such works, to answer the purpose intended, to be produced to the Society on or before the first Tuesday in Feb. 1814.

N. B. As an encouragement to persons to turn their thoughts to improvements of this nature, if any should be made on the present method of conducting the business of gunpowder making, which fall short of the total prevention of explosion, and they are sent to the Society for the sake of humanity, the papers so sent in will receive due consideration, and such bounty or reward will be bestowed as they may appear to merit.

156. **TRANSIT INSTRUMENT.** To the person who shall invent and produce to the Society a cheap and portable transit instrument which may easily be converted into a zenith-sector, capable of being accurately and expeditiously adjusted for the purpose of finding the latitudes and longitudes of places, and superior to any portable transit-instrument now in use; the gold medal, or forty guineas.

To be produced on or before the last Tuesday in January, 1814.

157. **TAKING WHALES BY THE GUN-HARPOON.** To the person who, in the year 1813, shall strike the greatest number of whales, not fewer than three, with the gun-harpoon; ten guineas.

Certificates of the striking such whales, and that they were actually taken in the year 1813, signed by the master, or by the mate when the claim is made by the master, to be produced to the Society, on or before the last Tuesday in December, 1813.

158. *This premium is extended one year further, on similar conditions.*

159. **FAMILY MILL.** To the person who shall invent and produce to the Society the best-constructed mill for grinding corn for the use of private families, or parish-poor; the construction to be such as to render the working of the mill easy and expeditious, and superior to any hitherto in use; the gold medal, or thirty guineas.

The mill, and *certificates* of its having been used to good effect, to be produced

to the Society on or before the first Tuesday in February, 1814. Cheapness and simplicity will be considered as essential parts of its merit; and the mill or a model, to remain with the Society.

160. MACHINE FOR RAISING COALS, ORE, &c. &c. To the person who shall invent a machine for raising coals, ore, &c. from mines, superior to any hitherto known or in use; and which shall produce the effect at a less expense than those already known or in use; the gold medal, or fifty guineas.

A model of the machine, made on a scale of not less than one inch to a foot, with a *certificate* that a machine at large on the same construction has been advantageously used, to be produced to the Society on or before the second Tuesday in Feb. 1814.

161. IMPROVED WALKING-WHEEL, OR CRANE. To the person who shall invent an improved walking-wheel or crane, on which the weight and power of any person or persons shall be applied with the greatest safety and effect, and so contrived that the power can be varied according to the greater or less weight to be raised or lowered; the gold medal, or thirty guineas.

The model on a scale of not less than one inch to a foot, with a proper *certificate* that the machine at large has been employed to good effect, to be produced to the Society on or before the second Tuesday in February, 1814.

162. MACHINE FOR RAISING WATER. To the person who shall invent a machine on a better, cheaper, and more simple construction than any hitherto known or in use for raising water out of wells, &c. from a depth of not less than fifty feet; the gold medal, or thirty guineas.

Certificates of the performance of the machine and a model of it, on a scale of not less than one inch to a foot, to be produced to the Society on or before the first Tuesday in February, 1814.

163. ELM PIPES. To the person who shall invent and discover to the Society a substitute for the elm pipes now in common use for the conveyance of water, which shall be cheaper, equally effectual, and more durable than any heretofore employed; the gold medal, or fifty guineas.

It is required that one of the pipes so employed, an accurate *account* of the method used, and every expense attending it, together with satisfactory accounts of its being effectual, to be delivered to the Society on or before the second Tuesday in January, 1814.

164. LAYING WOODEN PIPES. To the person who shall invent and discover to the Society a superior method of laying or connecting the wooden pipes now in use for conveying water, so as to lessen the injury they receive thereby; the silver medal, or twenty guineas.

It is required that a model, an accurate

account of the method used, and every expense attending it, together with satisfactory *certificates* of its being effectual, be delivered to the Society, on or before the second Tuesday in January, 1814.

165. EXTINGUISHING FIRES. To the person who shall produce to the Society the best and most effectual method of procuring an immediate supply of water in case of fire, or for the means best calculated to prevent or extinguish accidental fires in buildings, superior to any now in use; the gold medal, or thirty guineas.

Certificates of the method having been practised with success, with a full description thereof, to be delivered to the Society on or before the second Tuesday in January, 1814.

166. BORING AND BLASTING ROCKS. To the person who shall discover to the Society a more simple, safe, cheap, and expeditious method than any hitherto known or in use, of boring or blasting rocks in mines, shafts, wells, &c.; the gold medal, or thirty guineas.

Certificates of the method having been practised with success, with a full description thereof, to be delivered to the Society on or before the first Tuesday in January, 1814.

167. HEATING ROOMS FOR THE PURPOSE OF MANUFACTURERS. To the person who shall invent and discover to the Society a method of heating rooms, superior to any hitherto known or in use, and at a moderate expense, for the purpose of painters, japanners, and other manufacturers, so as to avoid the necessity of iron or copper tunnels going through the rooms to convey the smoke, whereby the danger from such tunnels may be prevented; the gold medal, or forty guineas.

A model or complete drawing and description of the method, with *certificates* that it has been successfully practised, to be delivered to the Society on or before the last Tuesday in March, 1814.

168. IMPROVED VENTILATION. To the person who shall invent and produce to the Society a mode of permanently ventilating the apartments in hospitals, workhouses, and other crowded places, superior to any now known or used; the gold medal, or fifty guineas.

A model of the apparatus, and a full *account* of the means by which the effect has been produced, with proper *certificates*, to be delivered to the Society on or before the last Tuesday in February, 1814.

169. PREVENTING ACCIDENTS FROM HORSES FALLING WITH TWO-WHEELED CARRIAGES. To the person who shall invent and produce to the Society a method, superior to any hitherto known or in use, to prevent accidents from the falling of horses with two-wheeled carriages, especially on steep declivities; the silver medal, or fifteen guineas.

A model of the apparatus, and a full account of the means by which the effect has been produced, with proper *certificates* that the same has been used with success, to be delivered to the Society on or before the second Tuesday in January, 1814.

170. IMPROVING TURNPIKE AND OTHER ROADS. To the person who shall discover to the Society the most effectual and cheapest method, verified by actual experiments, of combining the materials ordinarily employed in making or repairing roads, so as to form them of the hardest consistency by their cementing properties, or by an artificial mixture of earth, stones, &c. altered by heat, or any other mode, so as to form an even, hard, and durable carriage-road; the gold medal, or thirty guineas.

It is required that an accurate account of the method used, and every expense attending it, together with satisfactory *certificates* of its being effectual, be delivered to the Society on or before the first Tuesday in March, 1814.

171. RAISING THE BODIES OF PERSONS WHO HAVE SUNK UNDER WATER. To the person who shall invent and produce to the Society a cheap and portable drag, or other machine, superior to those now in use, for the purpose of taking up, in the best and most expeditious manner, and with the least injury, the bodies of persons who have sunk under water; the gold medal, or thirty guineas.

The drag or machine, to answer the purpose intended, to be produced to the Society on or before the first Tuesday in March, 1814.

172. FOR PREVENTING PREJUDICIAL EFFECTS TO THE PERSONS EMPLOYED IN POINTING NEEDLES. To the person who shall invent and produce to the Society a mode of obviating the prejudicial effects that attend the operation of pointing needles, by grinding them dry, during which the particles of grindstone-dust, and steel, being thrown into the air, and received with it into the lungs, occasion asthma, consumption, and other painful disorders; the gold medal, or thirty guineas.

A model of the apparatus, and a full account of the means by which the effect has been produced, together with proper *certificates* of its practicability and adoption, to be delivered to the Society on or before the second Tuesday in March, 1814.

PREMIUMS OFFERED FOR THE ADVANTAGE OF THE COM- MERCE OF THE UNITED EM- PIRE.

173. TAKING PORPOISES. To the people in any boat or vessel, who, in the year 1813, shall take the greatest number of porpoises on the coast of Great Britain or Ireland,

by gun-harpoon, or any other method, not fewer than thirty, for the purpose of extracting oil from them; the gold medal, or thirty guineas.

Certificates of the number, signed by the persons to whom they have been sold or delivered for the purpose of extracting the oil, to be produced to the Society on or before the last Tuesday in January, 1814.

174. OIL FROM PORPOISES. To the person who shall manufacture the greatest quantity of oil from porpoises taken on the coast of Great Britain or Ireland, in the year 1812, not less than twenty tons; the gold medal, or thirty guineas.

Certificates of the oil having been made from porpoises actually caught on the coast of Great Britain or Ireland, and two gallons of the oil as a sample, to be produced to the Society on or before the last Tuesday in February, 1814.

175. CURING HERRINGS. To the person or persons who shall, before January, 1814, cure the greatest quantity of white herrings, not less than thirty barrels, equal in all respects to the best Dutch herrings, the same being caught in the British or Irish seas, and cured in a British or Irish vessel or port; the gold medal, or fifty guineas.

176. For the next greatest quantity, not less than fifteen barrels; the silver medal, or twenty guineas.

A sixteen gallon barrel of the herrings to be produced to the Society on or before the first Tuesday in February, 1814, with *certificates*, that the conditions of the premium have been fulfilled, and that the whole were cured in the same manner as the specimen, together with a full description of the process employed.

PREMIUMS OFFERED FOR THE ADVANTAGE OF THE BRITISH COLONIES.

177. NUTMEGS. For the greatest quantity of merchantable nutmegs, not less than ten pounds weight, being the growth of his Majesty's dominions in the West Indies, or any of the British settlements on the coast of Africa, or the several islands adjacent thereto, and equal to those imported from the islands of the East Indies; the gold medal, or fifty guineas.

Satisfactory *certificates*, from the governor or commander in chief, of the place of growth, with an account of the number of trees, their age, nearly the quantity of fruit, on each tree, and the manner of culture, to be produced on or before the first Tuesday in January, 1814.

178. KALI FOR BARILLA. To the person who shall have cultivated, in the Bahama-islands, or any other part of his Majesty's dominions in the West Indies, or any of the British settlements on the coast of Africa, or

the several islands adjacent thereto, in the year 1812, the greatest quantity of land, not less than two acres, with Spanish kali fit for the purpose of making barilla; the gold medal, or thirty guineas.

179. For the next greatest quantity, not less than one acre; the silver medal, or fifteen guineas.

Certificates, signed by the governor or commander in chief for the time being, of the quantity of land so cultivated, and of the state of the plants at the time of signing such *certificates*, to be delivered to the Society, with samples of the kali, on or before the second Tuesday in January, 1814.

180. DESTROYING THE INSECT COMMONLY CALLED THE BORER. To the person who shall discover to the Society an effectual method of destroying the insect commonly called the borer, which has of late years been so destructive to the sugar canes in the West-India islands, the British settlements on the coast of Africa, and the several islands adjacent thereto; the gold medal, or fifty guineas.

The discovery to be ascertained by satisfactory *certificates*, under the hand and seal of the governor or commander in chief for the time being, and of some other respectable persons, inhabitants of the islands, or other place, in which the remedy has been successfully applied; such *certificates* to be delivered to the Society on or before the first Tuesday in January, 1814.

181. CULTIVATION OF HEMP IN UPPER CANADA. To the person who shall sow with hemp the greatest quantity of land in the province of Upper Canada not less than six arpents, (each four-fifths of a statute acre) in the year 1812, and shall at the proper season cause to be plucked the summer hemp, or male hemp bearing no seed, and continue the winter hemp, or female hemp bearing seed, on the ground until the seed is ripe; the gold medal, or one hundred dollars.

182. To the person who shall sow with hemp the next greatest quantity of land in the same province of Upper Canada, not less than five arpents in the year 1812, in the manner above mentioned; the silver medal, or eighty dollars.

183. For the next greatest quantity of land, in the same province, and in a similar manner, not less than four arpents; sixty dollars.

184. For the next greatest quantity of land in the same province, and in a similar manner, not less than three arpents; forty dollars.

185. For the next greatest quantity of land in the same province, and in a similar manner, not less than one arpent; twenty dollars.

Certificates of the number of arpents, the method of culture, of the plucking of the hemp, with a general account whether sown broad-cast or in drills, the expense, soil,

cultivation, and produce, to be transmitted to the Society, certified under the hand and seal of the governor or lieutenant-governor, together with 28 lb. of the hemp, and two quarts of the seed, on or before the last Tuesday in April, 1814.

186 to 190. IN LOWER CANADA. Premiums exactly similar in all respects to those held out for the province of Upper Canada, are also offered to the province of Lower Canada.

191 to 195. IN NOVA SCOTIA AND NEW BRUNSWIC. Similar premiums in all respects are also offered to the provinces of Nova Scotia, and New Brunswick.

196. IMPORTATION OF HEMP FROM CANADA, NOVA SCOTIA, AND NEW BRUNSWIC. To the master of that vessel which shall bring to this country the greatest quantity of marketable hemp, not less than one hundred tons, in the year 1813, the produce of Upper Canada, or of one of the above-mentioned provinces; the gold medal.

197. To the master of that vessel which shall bring the next quantity, not less than fifty tons; the silver medal.

Certificates satisfactory to the Society, to be produced by the master of the vessel on or before the first Tuesday in February, 1814, to testify that such hemp was grown and prepared in Canada, Nova Scotia, or New Brunswick.

198. SUBSTITUTE FOR HEMP. To the person who, in the year 1813, shall discover and produce to the Society, a substitute for hemp, equally cheap, durable, and applicable to all the purposes for which hemp is now used; the gold medal, or fifty guineas.

A quantity of the substitute, not less than one hundred weight, together with proper *certificates* from the governor or commander in chief, if raised in any of the British colonies, or from the Secretary of the Board of Trade, if raised in the East Indies, to prove that the same has been used with success, to be produced to the Society on or before the last Tuesday in February, 1814.

N. B. The premiums for Nos. 181, to 198, are all extended one year further, on similar conditions. *Certificates* to be produced at the same time of the year ensuing.

199. SILK. For the greatest quantity of silk proper for manufactures, not less than one hundred pounds weight produced by any person in Malta, or islands near adjacent thereto, in the possession of Great Britain in the year 1813, from silk-worms bred there; the gold medal, or fifty guineas.

Specimens of the silk, not less than one pound, with an account of the method in which the silk-worms were managed; the kind and size of the mulberry-trees from whence they were furnished with food, and particulars respecting the culture of the mulberry-trees for that purpose, to be produced to the Society on or before the first Tuesday in March, 1814.

200. For the next greatest quantity, not less than fifty pounds, on similar conditions; the silver medal; or twenty guineas.

Satisfactory *certificates* from the governor or commander in chief of the district where the said silk was produced, and of the several particulars above-mentioned, to be delivered to the Society along with the samples required.

N. B. The same premiums, on similar conditions, will be given for silk produced in the years 1814 and 1815, *certificates* to be sent at the same time of the years ensuing.

PREMIUMS OFFERED FOR THE ADVANTAGE OF THE BRITISH SETTLEMENTS IN THE EAST INDIES.

201. **BHAUGULPORE COTTON.** To the person who shall import into the port of London, in the year 1813, the greatest quantity, not less than one ton, of the Bhaugulpore cotton, from which cloths are made in imitation of nankeen, without dyeing; the gold medal.

A quantity of the cotton, not less than five pounds weight, in the pod, and five pounds carded, to be produced to the Society, with proper *certificates*, signed by the Secretary of the Board of Trade of Ben-

gal or Bombay, on or before the last Tuesday in February, 1814.

202. **ANNATTO.** To the person who, in the year 1813, shall import into the port of London, from any part of the British settlements in the East Indies, the greatest quantity of annatto, not less than five hundred weight; the gold medal.

A quantity of the annatto, not less than ten pounds weight, to be produced to the Society, with proper *certificates*, signed by the Secretary of the Board of Trade of the respective settlement, that the annatto is the produce of such settlement, on or before the last Tuesday in February, 1814.

203. **TRUE COCHINEAL.** To the person who, in the year 1813, shall import into the port of London, from any part of the British settlements in the East Indies, the greatest quantity of true cochineal, not less than three hundred weight; the gold medal.

A quantity of the cochineal, not less than three pounds weight, with proper *certificates*, signed by the Secretary of the Board of Trade of the respective settlement, that the cochineal is the produce of such settlement; to be produced to the Society on or before the first Tuesday in February, 1814.

N. B. The Premiums from No. 201 to 203 inclusive, are all extended two years further on similar conditions. *Certificates* to be produced at the same time of the years ensuing.

GENERAL CONDITIONS.

AS the great object of the Society in rewarding individuals is to draw forth and give currency to those inventions and improvements, which are likely to benefit the public at large, candidates are requested to observe, that if the means, by which the respective objects are effected, do require an expense or trouble too great for *general purposes*, the Society will not consider itself as bound to give the offered reward; but, though it thus reserves the power of giving in all cases such part only of any premium as the performance shall be adjudged to deserve, or of withholding the whole if there be no merit, yet the candidates may be assured the Society will always judge liberally of their several claims.

All candidates are to take notice, that no claim for a premium will be attended to, unless the conditions of the advertisement are fully complied with.

All models of machines, which obtain premiums or bounties, shall be the property of the Society; and, where a premium or bounty is given for any machine, a perfect model and description thereof shall be given to the Society.

All the premiums of this Society are designed for Great Britain and Ireland, unless expressly mentioned to the contrary.

The claims shall be determined as soon as possible after the delivery of the specimens.

It is expected that all articles for claims or bounties be sent to the Society, carriage paid.

No person shall receive any premium, bounty, or encouragement, from the Society, for any matter for which he has obtained, or purposes to obtain, a patent, or for which he has obtained, or expects any premium or reward from any other Society.

A candidate for a premium, or a person applying for a bounty, being detected in any disingenuous method to impose on the Society, shall forfeit such bounty, and be deemed incapable of obtaining any for the future.

No member of this Society shall be a candidate for, or entitled to receive, any premium, bounty, or reward whatsoever, except the honorary medal of the Society. The candidates are, in all cases, expected to furnish a particular account of the subject of

their claims; and where certificates are required to be produced in claim of premiums, they should be expressed, as nearly as possible, in the words of the respective advertisements, and be signed by persons who have a positive knowledge of the facts stated.

Where premiums or bounties are obtained in consequence of specimens produced, the Society mean to retain such part of those specimens as they may judge necessary, making a reasonable allowance for the same.

No candidate, not a member, shall be present at any meeting of the Society or Committees, or admitted at the Society's rooms, after they have delivered in their claims, until such claims are adjudged, unless summoned by the Committee.

The Society, anxious to promote the Arts of their country, have adopted the resolution of forming a Collection of Prints, to be open for public inspection; and, having arranged those already in their possession, invite engravers to send etched or finished proofs of their plates; and hope that amateurs, collectors, and publishers of works of art, will also contribute to the undertaking.

Prints of machines, or maps, will also come within the above arrangement.

The Society further invite the communications of scientific and practical men, upon all subjects connected with the views of the Society, although their experiments may have been conducted upon a smaller scale than the terms required by the premiums; as such communications may afford ground for more extensive application, and thus materially contribute to the advantage of the public.

The Library of the Society, which has already become very valuable, may yet receive considerable additions and improvements from the presents of members, or other persons who may be inclined to place useful books or valuable manuscripts in a repository, at once permanent and conducive to the national benefit.

All communications are to be made by letter, addressed to CHARLES TAYLOR, M. D. the Secretary, at the Society of Arts, &c. Adelphi, London.

And where articles are sent by Sea for the Society, the Bills of Lading are to be addressed to the care of WILLIAM VAUGHAN, Esq. Mincing-lane, London, who has politely undertaken to receive them for the Society.

The Winchester bushel is the measure referred to for grain; and, as the acres of different districts vary in extent, it is necessary to observe, that the Society mean Statute Acres of five and a half yards to the rod or pole, when acres are mentioned in their list of premiums; and they request that all communications to them may be made agreeably thereto.

The Society desire that the Papers on different subjects sent to them may be full, clear, and explicit, fit for publication, and rather in the form of Essays than of Letters: and that descriptive Drawings may be sent, with the Models and Machines laid before the Society.

* * To persons inclined to leave a sum of money to this Society by will, the following form is offered for that purpose.

Item. I give and bequeath to A. B. and C. D. the sum of _____ upon condition and to the intent that they, or one of them, do pay the same to the Collector, for the time being, of a Society in London, who now call themselves the Society for the Encouragement of Arts, Manufactures, and Commerce; which said sum of _____ I will and desire may be paid out of my personal estate, and applied towards the carrying on the laudable designs of the Society.

N. B. The Society considering that it would be beneficial to the Commerce of the United Kingdom to bring the British Marbles into more general use, and that the most effectual method of accomplishing their object would be, for the present, to make them more generally known in the capital, have come to the following resolutions:—

Resolved.—That specimens of British Marbles be exposed in the Society's Rooms, in the Adelphi, for the inspection of the public, under the following regulations:

1st. That all the specimens be exact to a given size, viz. eight inches high, six inches broad, one inch thick, and polished on one face.

2. That a book be kept, containing the number of each specimen, and describing the situation of the quarry, the name of the parish where situated, the distance of the quarry from a beaten road, and the distance of that road from water-carriage, with the name of the donor and proprietor. Any remarks on the qualities of the marbles, or on the lime produced from them, will be gratefully received and preserved by the Society, as materials for future inquiries.

Resolved,—That as the exertions of the Society can be generally beneficial, only inasmuch as their views are seconded by the public, the Society request, that all persons proprietors of marble quarries, will favour them with a specimen of the marble, worked to the exact size above mentioned, with the description of the quarry as above, that the same may be entered in the book to be preserved for the use of the public. By such arrangements, it is expected that the interest of the proprietors of the quarries will be promoted, and the use of British marble much extended. A variety are already exhibited in the Society's Great Room.

The Society take this opportunity of returning their thanks to the several Societies and Individuals, who have favoured them with presents for their Repository and Library.

Premiums and Rewards bestowed by the Society of Arts, Manufactures and Commerce, Adelphi, during their Session, which commenced on the fourth Wednesday in October, 1812, and closed on the 2d of June, 1813.

ON Tuesday the 25th of May, his Grace the DUKE of NORFOLK, the President, distributed the Rewards then adjudged.

IN AGRICULTURE.

To Major Bryan Hesleden, of Herton, in Ribblesdale, Yorkshire, for improving upwards of 177 acres of waste land, class 44. The gold medal.

To W. C. Knowllys, Esq. of Woods-farm Lodge, near Crawley in Sussex, for improving 308 acres of waste land. The lesser gold medal.

To John Maurice Jones, Esq. of Chester, for planting 979,939 timber trees in North Wales. The lesser gold medal.

To Patrick Steuart, Esq. of Auckrunhart, Banffshire, for planting 380,000 larch, 390,000 Scotch firs, and 10,000 birch trees, in North Britain. The lesser gold medal.

To Mr. Leonard Phillips, Jun. Arborist, experimental Horticulturist and Agriculturist, of the Portsmouth road, about a quarter of a mile beyond Vauxhall Turnpike, for planting upwards of 5000 sorts of hardy fruit trees. The lesser gold medal.

To William Backhouse, Esq. of Shull House, near Wolsingham, Durham, for planting 300,000 larches, and 50,000 other timber trees, class 10. The gold medal.

To Jonathan Backhouse, Jun. Esq. of Darlington, Durham, for planting 271,000 larches, class 11. The silver medal.

To Mr. Edward Knight, of Great Barfield, Essex, for the growth of a crop of beans, and sowing wheat on the same land, the same year, and thus preventing the necessity of a fallow, class 21. The gold medal.

To Mr. Edward Knight, of Great Bardfield, Essex, for twenty-one stocks of bees, class 27. Ten guineas.

IN CHEMISTRY.

To Thomas White, Esq. of Woodlands, Durham, for the application of larch bark, to answer all the purposes of oak bark in tanning leather. The lesser gold medal.

To Mr. Charles Drury, of Mansfield, Nottinghamshire, for making an improved paste from potatoes, for the use of bookbinders, trunk-makers, &c. Ten guineas.

IN POLITE ARTS.

To Miss Eliza Phillips, of Wandsworth Road, for an original drawing of a landscape. The silver medal.

To Miss Louisa Anne Phillips, of Wandsworth Road, for an original landscape. The silver palette.

To William Harriott, Esq. of West Hall, Mortlake, Surrey, for an original drawing of Tintern Abbey. The silver palette.

To William Peart, Esq. at the Rev. George Porters, Billericay, Essex, for a drawing of Rolla, a copy, class 102. The silver medal.

To Master F. Y. Hurlstone, King-street, Covent-garden, for a drawing of Eve, a copy. The lesser silver medal.

To Master A. P. Hurlstone, King street, Covent-garden, for a drawing of St. Jean, a copy. The silver palette.

To Miss A. I. E. Innes Baker, of Dowdeswell, near Cheltenham, for an original drawing of fruit. The lesser gold medal.

To Miss Coster, of Hammersmith, for an original drawing of flowers. The silver medal.

To Miss Henrietta Sutherland, of Sloane Square, Chelsea, for a drawing of an oak, a copy. The silver palette.

To Peltro William Tomkins, Esq. New Bond Street, for refining ox gall so as to make it colourless, and by its use, rendering water colour drawings more bright and permanent. The lesser gold medal.

To Master George Bauke, Tottenham Court Road, for a drawing of Rolla, a copy. The silver palette.

To William Taylor, Jun. Esq. of Yatton, near Leominster, for producing on Wood charred by fire on the surface, the effect of painting by forming the lights with Gouges. The silver medal.

To Miss Margaret Geddes, of Alderbury, near Salisbury, for an original oil painting of a peasant boy. The lesser gold medal.

To Miss Anne Hayter, Wells Street, Oxford Street, for a drawing of the Silence after Bartolozzi, a copy, class 110. The silver medal.

To Mr. Charles Porden, East Lane, Bermondsey, for a design for a palace, original, class 116. The gold medallion, *in conformity to the Will of the late John Stock, Esq. of Hampstead.*

To Mr. Matthew Habershon, Bentinck Street, Manchester Square, for a design of a palace, original, class 117. The silver medallion.

To Mr. G. R. Pain, Diana Place, New Road, for a design for a gothic palace, original. The silver medal.

To Mr. Lewis Valliamy, Pall Mall, for a design for a palace, original. The silver medal.

To Miss M. E. Tomkins, New Bond Street, for a drawing of the head of Jupiter, a copy. The lesser silver medal.

To Miss Anne Steele, No. 3, Union Place,

Lambeth, for a drawing of a landscape, a copy. The lesser silver medal.

To Mr. Charles Russell, Warwick Street, Golden Square, for an outline drawing of the Gladiator Repellens, class 105. The silver medal.

To Mr. John Brewster, Winchester Place, Pentonville, for an outline drawing of the Gladiator Repellens. The lesser silver medal.

To Mr. John Carver, London Street, Fitzroy Square, for an outline drawing of the Gladiator Repellens. The lesser silver medal.

To Mr. William Page, Fitzroy Terrace, Kentish Town, for an outline drawing of the Gladiator Repellens. The silver palette.

To Miss Mary Ann Warren, Constitution Row, Gray's Inn Lane, for a drawing of flowers, a copy. The silver palette.

To Miss Mary Ann Say, Norton Street, Fitzroy Square, for a drawing of Cupidon, a copy. The silver palette.

To Master I. Ward, Buckingham Place, Fitzroy Square, for a drawing of the death of Lucretia, a copy. The lesser silver medal.

To Master I. Robertson, Great Chesterfield Street, St. Mary le-bone, for a drawing of a landscape, a copy. The lesser silver medal.

To Master Jabez Newell, Whitecross Street, for a miniature drawing, a copy. The lesser silver medal.

To Miss Eliza Hay, Tavistock Street, for an original landscape. The silver palette.

To Miss Maria Ann Chalon, Beaumont Street, Devonshire Place, for a drawing of St. James the Elder, a copy. The silver palette.

To Master A. T. Roffe, Ossulton Street, Somers Town, for a drawing of St. John and the Lamb, a copy. The silver palette.

To Master William Ross, Martlett Court, Bow Street, for a drawing of the head of Homer, a copy. The silver palette.

To Miss F. Edwards, No. 27, Great Suffolk street, Blackman Street, for an original drawing of Cupid bending his bow. The silver palette.

To Miss Landseer, No. 33, Foley Street, Portland Chapel, for an original landscape. The silver palette.

To Master T. Landseer, No. 33, Foley Street, Portland Chapel, for an etching of animals. The lesser silver medal.

To Master Edward Landseer, No. 33, Foley Street, Portland Chapel, for a drawing of animals from the life. The silver palette.

To Master John Hayter, Wells Street, Oxford-street, for an outline of Alexander, from a cast. The silver palette.

To Mr. H. Wyatt, Castle Street, Leicester square, for a drawing of the Discobolos. The silver palette.

To Samuel Cousins, St. Mary Steps, Exeter, for a drawing of Ben Jonson, a copy. The silver palette.

To Mr. Charles Wilson, Worcester Street, Borough, for a method of preserving oil paintings from decay. Ten guineas.

To Mr. William Finden, John Street, Fitzroy Square, for an engraving of the Rent Day feast, from a painting by Teniers, class 128. The gold medal.

To Mr. Edward Scriven, Clarendon Square, Somers Town, for an engraving of Gerhard Douw, from a painting by himself. The lesser gold medal.

To Mr. Charles Rivers, Water Lane, Kentish Town, for an engraving of a portrait. The lesser silver medal.

To Mr. William Wyon, Birmingham, for a medal die engraving, the head of Ceres, class 136. The gold medal.

To Mr. S. F. B. Morse, Buckingham Place, Fitzroy Square, for an original cast of the dying Hercules, class 118. The lesser gold medal.

To Mr. William Tallmach, Castle Street East, for a bronze cast of Venus, disarming Cupid, class 120. The silver medal and twenty guineas.

IN MANUFACTURES.

To John Wheateley, Esq. of Cork, Ireland, for his invention of a machine for the speedy separation and manufacture of Farina or Flour from potatoes, and for various applications thereof to make sea-biscuits, bread and pastry. The lesser gold medal.

IN MECHANICS.

To Captain John Peat, Bloomsbury Square, for a temporary rudder for the preservation of ships from being lost at sea. The gold medal.

To Mr. John Farey, Jun. Upper Crown Street, Westminster, for an instrument for describing or drawing ellipses of various forms and sizes. The gold medal.

To Mr. George Prior, Jun. of Otley, Yorkshire, for his method of preventing the ill effects arising to the workmen, from inhaling the small particles of iron and stone, in grinding or pointing needles. Twenty-five guineas.

To Mr. Thomas Roberts, Wardour Street, Soho, for an elevator, or a machine which can be raised up to a great height, and employed as a fire escape, an observatory, or for repairs of buildings. The silver medal, and twenty-five guineas.

To Mr. G. Hughes, of Manchester, for a temporary scaffold moving round an upright pole, by the use of which, the interior of domes may be easily repaired or beautified. The silver medal.

To Mr. H. R. Palmer, Fort Place, Bermondsey, for a gauge, for the purpose of marking a line along the centre of any parallel, or inclined surface, also for finding the centre of a circle, square, or any regular polygon. The silver medal.

To Mr. Malcolm Mc. Gregor, Bell Yard, Temple Bar, for an improved German flute, capable of being tuned to a greater extent and certainty than any other. The silver medal and twenty guineas.

To Mr. John Padbury, Speenhamland, for

a carriage wheel guard, by which the wheel is retained safe upon the axis, in case of the lynch-pin coming out. The silver medal.

To Mr. Robert Hughes, of Rouaben, Denbighshire, for an improved axis for large water wheels, to prevent the pivot from getting loose in the shaft, or to repair it when damaged. The silver medal.

To I. Stephens, Esq. Reading, for a cheap wooden forcing pump, to raise water from deep wells. The lesser silver medal.

To Mr. Samuel Barralet, Cole Harbour Street, Hackney Road, for an improved Shop-board for tailors, by which the diseases are obviated to which this class of men are particularly subject. The silver medal, and ten guineas.

To Mr. Durand, of Canada, for a machine for hackling and scutching hemp. The silver medal.

To Mr. Grant Preston, Burr Street, London Dock, for a ship's binnacle and lamp, by means of which the ship's compass is seen with clearness and certainty. The silver medal.

To N. Douglas, Esq. Chiswell Street, for an instrument for firing cannon, by which, a number of cannon may be fired in quick succession without the necessity of a match. The silver medal.

To Mr. Joseph Davis, Catherine Street, Strand, for a safe and economical mode of burning shavings in workshops, and converting them to useful purposes. The silver medal.

To Mr. A. Young, Jun. Bury Street, Bloomsbury, for a fire escape ladder formed instantaneously, by the application of a jointed pole to a window. The lesser silver medal, and five guineas.

To Mr. James Swaine, Piccadilly, for an improved guide post, the arms of which are made of cast iron with open spaces between and within the letters, so as to be more easily distinguished by day or night. The lesser silver medal.

To Mr. I. Whitford, St. Bartholomew's Hospital, for a mechanical substitute for leeches in bleeding. The lesser silver medal.

To Mr. I. Tilley, Whitechapel, for an Hydro-pneumatic blow-pipe, for the use of enamellers, assayers, and glass-blowers. Fifteen guineas.

To Mr. Frederic Williams, Brown Street, Bryanstone Street, for an improved painters easel. Five guineas.

To Mr. James Stone, No. 79, Great Tichfield-street, for an expanding centre-bit, by which circular holes of various diameters may be made. Five guineas.

IN COLONIES AND TRADE.

To Mr. John Lewis, Broadstairs, for curing 6533 barrels of British white herrings. The gold medal.

To Mr. Thomas Stiles, of Norwich, for curing British white herrings. Twenty guineas.

To Phillips London, Esq. Cannon Street, for curing, or pickling, mackerel. The silver medal.

* * Since the last Distribution of Rewards, SEVENTY-EIGHT new Members have been elected.

The LIST of PREMIUMS offered may be had, *gratis*, at the Society's House in the Adelphi. By Order of the Society,
 June, 1813. CHARLES TAYLOR, M. D. Secretary.

N. B. Where errors have arisen in the address of any Member of the Society, information is desired to be given to Mr. R. Elwin, the Collector, at the Society's house in the Adelphi, who receives the Subscriptions from the Members, and furnishes Receipts for the same.

Lately was published, Price 10s. 6d.

THE THIRTIETH VOLUME of the SOCIETY'S TRANSACTIONS, which may be had from the Housekeeper, at the Society's House in the Adelphi. Also complete sets of their Transactions, or any single Volume.

Also, An ANALYTICAL INDEX of the FIRST TWENTY-FIVE VOLUMES of the TRANSACTIONS of the SOCIETY, to the Termination of their Session, June 1807, price 5 s.

A CATALOGUE of the BOOKS in the Society's Library may be procured as above, price One Shilling.